

Question #1 of 60

- A) has appropriately incorporated the three recommended rating system elements from the ROS.

Explanation

CFA Institute Research Objectivity Standards recommend that rating systems include the following three elements: (1) the recommendation or rating category, (2) time horizon categories, and (3) risk categories. Holly's report on BlueNote provides all three elements (strong buy, 6- to 12-month time horizon, average level of risk) and also includes the recommended disclosure on how investors can obtain a complete description of the firm's rating system.

For Further Reference:

Study Session 1, LOS 3.a, b

SchweserNotes: Book 1 p.80, 81

CFA Program Curriculum: Vol.1 p.209, 212

Question #2 of 60

- C) There is a violation regarding the BigTime report, but no violation with the BlueNote report.

Explanation

Standard II(A). Holly has utilized public information to conduct an intensive analysis of BlueNote and has also utilized information obtained from a supplier that, while nonpublic, is not by itself material. When combined with his knowledge of BlueNote's material public information, however, the information from the supplier allows Holly to make a significant and material conclusion that would not be known to the public in general. This situation falls under the Mosaic Theory. Holly is free to make recommendations based on her material nonpublic conclusion on BlueNote since the conclusion was formed using material public information combined with *nonmaterial* nonpublic information. Thus, the BlueNote report did not violate Standard II(A) Integrity of Capital Markets - Material Nonpublic Information, and since there appears to be a reasonable and adequate basis, does not appear to violate any other Standards either. Holly's report on BigTime, however, is based in part on a conversation that he overheard between executives at BigTime. The information he overheard related to the sale of one of BigTime's business units was both material and nonpublic. The fact that several other analysts overheard the conversation as well does not make the information public. Because Holly is in possession of material nonpublic information, he is prohibited by Standard II(A) from acting or causing others to act on the information. Therefore, his report on BigTime violates the Standard.

For Further Reference:

Study Session 1, LOS 2.a, b

SchweserNotes: Book 1 p.5

CFA Program Curriculum: Vol.1 p.21

Question #3 of 60

- C) does not comply with the ROS recommended procedures because neither the disclosure nor a page reference to the disclosure appears on the front of the research report.

Explanation

CFA Institute Research Objectivity Standards (ROS) require disclosures of conflicts of interest such as beneficial ownership of securities of a covered firm. The ROS recommend that such disclosure be made either in the supporting documents or on the firm's Web site. It is further recommended that the disclosure, or a page reference to the disclosure, be made in the report itself. Holly owns shares of BigTime that may potentially benefit from his recommendation. His

best course of action would be to disclose the conflict on both the firm's Web site and in the report.

For Further Reference:

Study Session 1, LOS 3.a, b

SchweserNotes: Book 1 p.80, 81

CFA Program Curriculum: Vol.1 p.209, 212

Question #4 of 60

A) violated the Standard by attempting to manipulate the market price of BigTime stock.

Explanation

Standard II(B) - Market Manipulation. Holly has issued a buy recommendation on BigTime stock. The analysis is based on a very optimistic analysis of the company's fundamentals. Yet, three days after issuing the report, Holly decides to sell all of his clients' holdings as well as his own holdings of BigTime stock after observing a rise in the price of the stock. Holly's report, which caused an increase in the price of BigTime stock, was intended to deceive market participants into believing the company was a good investment when, as indicated by his subsequent sale of the shares, Holly believed otherwise. The combination of actions indicates that Holly is likely attempting to manipulate the price of the stock for his clients', and his own, benefit. Thus, he has likely violated Standard II(B) - Integrity of Capital Markets - Market Manipulation.

For Further Reference:

Study Session 1, LOS 2.a, b

SchweserNotes: Book 1 p.5

CFA Program Curriculum: Vol.1 p.21

Question #5 of 60

C) may accept the desk pen but should not accept the concert tickets.

Explanation

Standard I(B) - Professionalism: Independence and Objectivity. Members and candidates are prohibited from accepting any gift that could reasonably be expected to interfere with their independence and objectivity. The desk pen is a token item with little material value and can be accepted without violating the Standard. However, the concert tickets are likely to have a very substantial amount of material value since the concert is sold out and involves a popular musical act. Best practice dictates that Holly should not accept the concert tickets since they could reasonably be expected to compromise Holly's independence and objectivity.

For Further Reference:

Study Session 1, LOS 2.a, b

SchweserNotes: Book 1 p.5

CFA Program Curriculum: Vol.1 p.21

Question #6 of 60

A) No.

Explanation

Standard V(B) - Communication With Clients and Prospective Clients. Standard V(B) requires members and candidates to promptly disclose any changes that materially affect investment processes. Holly has provided a detailed description of the new valuation model that will be used to generate investment recommendations and has disclosed the new limitations on the investment universe (i.e., no alcohol or tobacco stocks). Therefore, it does not appear that he

has violated Standard V(B). Holly also has not violated any other standards. It is acceptable for him to e-mail those clients with e-mail addresses and send his letter by regular mail to those who do not. Standard III(B) - Fair Dealing does not require that all clients receive investment recommendations or other communications at exactly the same time, only that the system treats clients fairly.

For Further Reference:

Study Session 1, LOS 2.a, b

SchweserNotes: Book 1 p. 5

CFA Program Curriculum: Vol.1 p.21

Question #7 of 60

A) 0.0055.

Explanation

The standard error can be determined by knowing the formula for the t -statistic:

$$t\text{-statistic} = (\text{slope estimate} - \text{hypothesized value}) / \text{standard error}$$

Therefore, the standard error equals:

$$\text{standard error} = (\text{slope estimate} - \text{hypothesized value}) / t\text{-statistic}$$

The null hypothesis associated with each of the t -statistics reported for the slope estimates in Table 1 is: H_0 : slope = zero. So, the standard error equals the slope estimate divided by its t -statistic: $0.2000 / 2.85 = 0.07$.

The confidence interval equals: slope estimate \pm ($t_{crit} \times$ standard error), where t_{crit} is the critical t -statistic associated with the desired confidence interval (as stated in the question, the desired confidence interval equals 99%). Exhibit 3 provides critical values for a portion of the Student t -distribution. The appropriate critical value is found by using the correct significance level and degrees of freedom. The significance level equals 1 minus the confidence level = $1 - 0.99 = 0.01$. The degrees of freedom equal $N - k - 1$, where k is the number of independent variables: $30 - 3 - 1 = 26$ degrees of freedom. Note that the table provides critical values for one-tail tests of hypothesis (area in upper tail). Therefore, the appropriate critical value for the 99% confidence interval is found under the column labeled "0.005," indicating that the upper tail comprises 0.5% of the t -distribution, and the lower tail comprises an equivalent 0.5% of the distribution. Therefore, the two tails, combined, take up 1% of the distribution. The correct critical t -statistic for the 0.01 significance level equals 2.779. Therefore, the 99% confidence interval for the FORECAST slope coefficient is:

$$0.2000 \pm 2.779(0.07) = (0.0055, 0.3945)$$

The lower bound equals 0.0055 and the upper bound equals 0.3945.

For Further Reference:

Study Session 3, LOS 9.f

SchweserNotes: Book 1 p.114

CFA Program Curriculum: Vol.1 p.282

Study Session 3, LOS 10.e

SchweserNotes: Book 1 p.144

CFA Program Curriculum: Vol.1 p.329

Question #8 of 60

A) F -statistic.

Explanation

The F -statistic is used to test the overall significance of the regression, which is formulated with the null hypothesis that all three slopes simultaneously equal zero. Note that this null hypothesis is identical to a test that the R -square equals zero.

For Further Reference:

Study Session 3, LOS 10.g

SchweserNotes: Book 1 p.146

CFA Program Curriculum: Vol.1 p.331

Question #9 of 60

- C) Reject the hypothesis that $b_2 \geq 0$, and conclude that small firms significantly outperformed large firms.

Explanation

Pilchard should test the following null hypothesis: $H_0: b_2 \geq 0$. The alternative hypothesis is: $H_A: b_2 < 0$ (a negative estimate for b_2 supports the small firm effect). The test is a one-tail hypothesis test. The critical value at the 0.01 value for a one-tail test equals -2.479 (area in lower tail equals 0.01; degrees of freedom equal 26). Exhibit 1 indicates that the t -statistic for the b_2 estimate equals -2.50 , which exceeds the critical value. Therefore, the null hypothesis that small firms do not outperform large firms, after controlling for COVERAGE and FORECAST should be rejected in favor of the alternative hypothesis that small firms outperform large firms (after controlling for COVERAGE and FORECAST).

For Further Reference:

Study Session 3, LOS 9.g

SchweserNotes: Book 1 p.116

CFA Program Curriculum: Vol.1 p.287

Study Session 3, LOS 10.e

SchweserNotes: Book 1 p.144

CFA Program Curriculum: Vol.1 p.329

Question #10 of 60

- C) 5%.

Explanation

The slope on the dummy variable (COVERAGE), which is 0.05 or 5%, equals the change in average returns between neglected and non-neglected firms after controlling for SIZE and FORECAST.

For Further Reference:

Study Session 3, LOS 10.j

SchweserNotes: Book 1 p.155

CFA Program Curriculum: Vol.1 p.334

Question #11 of 60

- C) 3 and 29, respectively.

Explanation

The ANOVA (Analysis of Variance) Table provides data on the sources of variation in the dependent variable (stock returns). The degrees of freedom for the regression sum of squares (a.k.a., the explained sum of squares) equals k , the number of independent variables: $k = 3$ in

Pilchard's regression. The total sum of squares equals the numerator of the sample variance formula for the dependent variable. Recall from Level I Quantitative Methods that the denominator of a sample variance equals $N - 1$. The denominator in the sample variance equals the degrees of freedom for the numerator (the total sum of squares). Therefore, the degrees of freedom for the total sum of squares in Pilchard's regression equals $30 - 1 = 29$.

For Further Reference:

Study Session 3, LOS 9.j

SchweserNotes: Book 1 p.119

CFA Program Curriculum: Vol.1 p.295

Study Session 3, LOS 10.g

SchweserNotes: Book 1 p.146

CFA Program Curriculum: Vol.1 p.331

Question #12 of 60

C) 14%.

Explanation

The estimated regression equation equals:

$$\text{return} = 0.06 + 0.05\text{Coverage} - 0.003\text{LN}(\text{SIZE}) + 0.20\text{Forecast}$$

where:

coverage equals zero if number of analysts exceeds 3

Therefore, the predicted return for Eggmann Enterprises equals:

$$\text{return} = 0.06 + 0 - 0.003\text{LN}(500) + 0.20(0.50)$$

$$\text{return} = 14.14\%$$

For Further Reference:

Study Session 3, LOS 9.h

SchweserNotes: Book 1 p.117

CFA Program Curriculum: Vol.1 p.287

Study Session 3, LOS 10.e

SchweserNotes: Book 1 p.144

CFA Program Curriculum: Vol.1 p.329

Question #13 of 60

C) Greater than 13%.

Explanation

Angle uses the uncovered interest rate parity relationship to forecast future spot rates. If the Canadian dollar is expected to depreciate relative to the U.S. dollar and the Mexican peso, then nominal interest rates in Canada must be higher than those in the United States and Mexico. The 13% nominal interest rate in Mexico is higher than the nominal interest rate in the U.S., so the nominal interest rate in Canada must be greater than 13%.

For Further Reference:

Study Session 4, LOS 13.e

SchweserNotes: Book 1 p.242

CFA Program Curriculum: Vol.1 p.518

Question #14 of 60

- B) No, under the Mundell-Fleming model, expansionary monetary policy in the U.S. would weaken the dollar.

Explanation

Hohlman is incorrect regarding the implications of an expansionary monetary policy in the U.S. under the Mundell-Fleming model, which predicts a depreciation of the dollar. The asset market approach focuses on fiscal policy-not monetary policy.

For Further Reference:

Study Session 4, LOS 13.I

SchweserNotes: Book 1 p.257

CFA Program Curriculum: Vol.1 p.555

Question #15 of 60

- C) The international Fisher relation must hold.

Explanation

If relative purchasing power parity holds, then inflation differentials drive future exchange rates. If the international Fisher relationship holds, then inflation differentials will be equal to interest rate differentials. Hence, when both relative purchasing power parity and the international Fisher relationship hold, uncovered interest rate parity should also hold. Covered interest rate parity always holds (by arbitrage) and is not a necessary additional condition. Real interest rate parity links the Fisher effect to the international Fisher relationship.

For Further Reference:

Study Session 4, LOS 13.f

SchweserNotes: Book 1 p.248

CFA Program Curriculum: Vol.1 p.532

Question #16 of 60

- A) correct.

Explanation

When the expected future spot rate is equal to the forward rate (and covered interest parity holds—by arbitrage), uncovered interest rate parity should hold as well. The international Fisher relationship links relative purchasing power parity to uncovered interest rate parity. Real interest rate parity links the Fisher effect to the international Fisher relationship.

For Further Reference:

Study Session 4, LOS 13.f

SchweserNotes: Book 1 p.248

CFA Program Curriculum: Vol.1 p.532

Question #17 of 60

- C) ¥206/£.

Explanation

Angle assumes the forward rate is an accurate predictor of the expected future spot rate, so we will use ¥200/£ as the future spot rate.

Angle states that uncovered interest rate parity holds.

Given a quote structure of ¥/£,

$$S_0 (1 + \text{Yen interest rate}) / (1 + \text{GBP interest rate}) = E(S_1)$$

$$S_0(1.064 / 1.097) = 200$$

$$S_0 = 206.20$$

Notice that the exchange rate will move from ¥206/£ to ¥200/£. So it takes fewer yen to buy one pound (i.e., the yen has strengthened), which uncovered interest rate parity predicts because the Japanese interest rate is lower.

For Further Reference:

Study Session 4, LOS 13.e, f

SchweserNotes: Book 1 p.242, 248

CFA Program Curriculum: Vol.1 p.518, 532

Question #18 of 60

A) Yes.

Explanation

Statement 3: Hohlman is correct regarding absolute purchasing power parity. It is based on the law of one price, which states that the price of goods should not differ internationally. Absolute purchasing power parity is not used to predict exchange rates.

Statement 4: Hohlman is correct regarding relative purchasing power parity. It does not hold in the short-run and therefore is not useful for predicting short-run currency values. It does tend to hold in the long run, however, and is therefore useful for long-run exchange rate forecasts.

For Further Reference:

Study Session 4, LOS 13.e

SchweserNotes: Book 1 p.242

CFA Program Curriculum: Vol.1 p.518

Question #19 of 60

C) Return on equity would be the same.

Explanation

Total assets, liabilities, revenues, and expenses are higher under proportionate consolidation as compared to the equity method. However, net income and stockholders' equity are the same under either method. Accordingly, profit margin and return on assets are typically lower under proportionate consolidation than under the equity method. Return on equity will be same under either method.

The following financial statements are provided for informational purposes only. The numbers in the acquisition method are derived as EPI + EP/BM LLC, except for the equity items.

<i>In Millions, Year-End 2008</i>	<i>EPI</i>	<i>EP/BM LLC</i>	<i>Acquisition Method</i>
Revenue	\$3,115	\$421	\$3,536
Cost of goods sold	\$2,580	\$295	\$2,875
SG&A	\$316	\$50	\$366
EBIT	\$219	\$76	\$295

Interest expense	\$47	\$8	\$55
Equity in earnings of EP/BM	\$22		N/A
Pretax income	\$194	\$68	\$240
Income tax	\$60	\$24	\$84
(-) Noncontrolling interest			\$22*
Net income	\$134	\$44	\$134
<hr/>			
<i>In Millions, December 31, 2008</i>	<i>EPI</i>	<i>EP/BM LLC</i>	<i>Acquisition Method</i>
<hr/>			
Assets			
Cash	\$118	\$13	\$131
Accounts receivable	\$390	\$50	\$440
Inventory	\$314	\$41	\$355
Property	\$1,007	\$131	\$1,138
Investment	\$38		N/A
Total	\$1,867	\$235	\$2,064
<hr/>			
Liabilities and Equity			
Accounts payable	\$274	\$35	\$309
Long-term debt	\$719	\$125	\$844
Equity	\$874	\$75	\$911**
Total	\$1,867	\$235	\$2,064

*50% of EP/BM LLC's net income of \$44

**\$874 + noncontrolling interest (50% of EP/LLC's equity of \$75)

For Further Reference:

Study Session 5, LOS 16.a

SchweserNotes: Book 2, p.1

CFA Program Curriculum: Vol.2 p.10

Question #20 of 60

C) 3.0.

Explanation

current ratio = current assets / current liabilities; $(131 + 440 + 355) / 309 = 3.0$.

For Further Reference:

Study Session 5, LOS 16.c

SchweserNotes: Book 2, p.24

CFA Program Curriculum: Vol.2 p.35

Question #21 of 60

C) 5.4.

Explanation

interest coverage = EBIT / interest expense; $295 / 55 = 5.36$.

For Further Reference:

Study Session 5, LOS 16.c

SchweserNotes: Book 2, p.24

CFA Program Curriculum: Vol.2 p.35

Question #22 of 60

A) higher.

Explanation

Under Equity Method:

Long-term debt to equity ratio = $719 / 874 = 0.82$

Under Acquisition Method:

Long-term debt to equity ratio = $844 / 911 = 0.93$

For Further Reference:

Study Session 5, LOS 16.a

SchweserNotes: Book 2, p.1

CFA Program Curriculum: Vol.2 p.10

Question #23 of 60

B) higher ending inventory.

Explanation

Regardless of the upstream/downstream sale, the net income would be identical under equity method and under acquisition method. All assets (including inventory) would be higher under acquisition method, regardless of upstream/downstream sale.

For Further Reference:

Study Session 5, LOS 16.a

SchweserNotes: Book 2, p.1

CFA Program Curriculum: Vol.2 p.10

Question #24 of 60

C) higher.

Explanation

Net income will be the same under the acquisition method (partial or full goodwill) and proportionate consolidation. Stockholders' equity will be higher under the acquisition method due to minority interest; thus, ROE will be higher under proportionate consolidation relative to the acquisition method.

For Further Reference:

Study Session 5, LOS 16.a

SchweserNotes: Book 2 p.1

CFA Program Curriculum: Vol.2 p.10

Question #25 of 60

B) \$210,267.

Explanation

The final period cash flow will include the project cash flows, the return of net working capital, and the after-tax sale of fixed capital used in the project. Because Tera is a replacement project, the incremental cash flows must be calculated. In other words, we are concerned with the additional sales and costs derived from the new equipment.

incremental sales = $708,000 - 523,000 = \$185,000$

incremental cash expenses = $440,000 - 352,000 = \$88,000$

incremental depreciation = $110,667 - 40,000 = \$70,667$

incremental project cash flows = $(185,000 - 88,000 - 70,667) \times (1 - 0.40) + 70,667 = \$86,467$

return of incremental net working capital = $\$110,000$

In the final year, the book value of the old machine (if not replaced) = $120,000 - 3 \times 40,000 = 0$.
Similarly, the book value of the new machine (if replaced) = $332,000 - 3 \times 110,667 = 0$.

incremental cash flow from after-tax sale of equipment = $(113,000 - 90,000) - 0.40[(113,000 - 90,000) - (0 - 0)] = \$13,800$

total cash flow in final period = $86,467 + 110,000 + 13,800 = \$210,267$

For Further Reference:

Study Session 7, LOS 21.a

SchweserNotes: Book 2 p.154

CFA Program Curriculum: Vol.3 p.27

Question #26 of 60

- C) Generate a base case, high, and low estimate of NPV by simultaneously changing sales, expense, and discount rate assumptions for each case.

Explanation

In scenario analysis, the analyst simultaneously changes several key variables to generate several different scenarios. Generally, three scenarios are created: (1) worst case, (2) most likely, and (3) optimistic. For the worst case scenario, for example, the analyst will use the slowest growth in sales, highest growth in expenses, and highest discount rate to derive an NPV under the worst of all possible situations. A similar approach is used to generate the optimistic scenario, but the best possible growth in each of the variables is used. The most likely is simply what the analyst thinks are the most reasonable assumptions for the discounted cash flow forecast under normal conditions. Using the different cases, the analyst can assess the risk of the project.

For Further Reference:

Study Session 7, LOS 21.d

SchweserNotes: Book 2 p.167

CFA Program Curriculum: Vol.3 p.43

Question #27 of 60

- A) Abandonment option.

Explanation

Once the Tera Project is begun, the project will be necessary for continuing operations. This is likely a result of the replacement nature of the project. If the equipment necessary for GigaTech's operations is replaced with newer equipment, abandoning the project is not really an option. Management does have the option of scaling up the project after initiation, which is known as an expansion option. Management can also wait up to nine months to make a decision on the Tera Project, giving them a timing option (note that this is not one of the answer choices). Finally, the equipment used in the Tera Project can support additional shifts if demand for GigaTech's products temporarily exceeds supply, giving them a flexibility option (specifically a production-flexibility option).

For Further Reference:

Study Session 7, LOS 21.f

SchweserNotes: Book 2 p.171

CFA Program Curriculum: Vol.3 p.52

Question #28 of 60**B) Sigma Project.****Explanation**

The least common multiple of lives approach requires estimating the least common denominator between two mutually exclusive projects with unequal lives. Since the Zeta and Sigma projects have lives of 3 and 2, the least common multiple is 6. The cash flows must be stated over a 6-year period, repeating the cash flow pattern as often as necessary (two times for Zeta and three times for Sigma). The cash flows are then discounted to find the net present value (NPV). The project with the highest NPV is selected. The cash flows are as follows:

	Year						
	0	1	2	3	4	5	6
Zeta Project	-360,000	250,000	220,000	190,000			
				-360,000	250,000	220,000	190,000
Total	-360,000	250,000	220,000	-170,000	250,000	220,000	190,000
Sigma Project	-470,000	330,000	390,000				
			-470,000	330,000	390,000		
					-470,000	330,000	390,000
Total	-470,000	330,000	-80,000	330,000	-80,000	330,000	390,000

Before calculating the NPV of each project, the cost of capital must be restated in nominal terms since the cash flow projections are stated in nominal terms. The nominal cost of capital is equal to $15.0\% = (1 + 0.1058)(1 + 0.04)$. The NPV of each project is calculated as follows:

$$\begin{aligned} NPV_{Zeta} &= -360,000 + \frac{250,000}{1.15} + \frac{220,000}{1.15^2} + \frac{-170,000}{1.15^3} + \frac{250,000}{1.15^4} + \frac{220,000}{1.15^5} + \frac{190,000}{1.15^6} \\ &= 246,425 \end{aligned}$$

$$\begin{aligned} NPV_{Sigma} &= -470,000 + \frac{330,000}{1.15} + \frac{-80,000}{1.15^2} + \frac{330,000}{1.15^3} + \frac{-80,000}{1.15^4} + \frac{330,000}{1.15^5} + \frac{390,000}{1.15^6} \\ &= 260,381 \end{aligned}$$

Since its NPV is greater, GigaTech should select the Sigma project.

For Further Reference:

Study Session 7, LOS 21.c

SchweserNotes: Book 2 p.162

CFA Program Curriculum: Vol.3 p.39

Question #29 of 60

C) Neither the statement regarding capital rationing nor the statement regarding cash flow projections is correct.

Explanation

The comments in the memo from GigaTech's board of directors are both incorrect. Earnings per share (EPS) is not a suitable criteria to evaluate capital budgeting projects. Under capital rationing, a firm selects the projects that increase the value of the firm by the greatest amount (i.e., have the highest NPV) subject to the capital constraints of the firm's budget. It is perfectly possible that projects that increase EPS will not get selected. For example, if a project has an NPV of \$80 and increases EPS by \$0.50 and a second project has an NPV of \$200 but will initially reduce EPS by \$0.20, the firm should select the second project (if its capital budget will allow it) since it adds more value. The capital budgeting process should not consider sunk costs (i.e., past costs that do not affect the cash flows of the project) such as costs to find investment projects. The cash flow projections should consider the economic impact from increased competition resulting from highly profitable investment projects.

For Further Reference:

Study Session 7, LOS 21.c

SchweserNotes: Book 2 p.162

CFA Program Curriculum: Vol.3 p.39

Question #30 of 60

B) Use a beta specific to each potential project to determine the appropriate discount rate.

Explanation

When evaluating potential capital investment projects, the discount rate should be adjusted for the risk of the project under consideration. This is frequently accomplished by determining a project beta and using this beta in the CAPM security market line equation: $r_i = R_F + \beta_i[E(R_M) - R_F]$. Project betas can be determined in a number of ways including using proxy firms with operations similar to the project under consideration, estimating an accounting beta, or through cross-sectional regression analysis. Whatever method used to determine the discount rate, it should be clear that the weighted average cost of capital (WACC) is only appropriate for projects with risk similar to the overall firm. If a project is more (less) risky than the overall firm, the discount rate used to evaluate the project should be greater (less) than the firm's WACC.

For Further Reference:

Study Session 7, LOS 21.e

SchweserNotes: Book 2 p.170

CFA Program Curriculum: Vol.3 p.49

Question #31 of 60

A) Sagan Termett's shareholders would not have to pay tax on any capital gains on the transaction.

Explanation

If assets are purchased rather than shares, payment is made to the target company; the company will pay tax on any capital gains, not the shareholders. Purchasing assets instead of the share capital is a way to avoid assumption of liabilities, and when less than 50% of a target's assets are sold, shareholder approval is not normally required.

For Further Reference:

Study Session 8, LOS 26.e

SchweserNotes: Book 2 p.281

CFA Program Curriculum: Vol.3 p.262

Question #32 of 60

C) \$21,000,000.

Explanation

	<i># Shares (millions)</i>	<i>Share Price (\$)</i>	<i>Value (\$ million)</i>
Broadstore value	20.00	19.20	384.00
Sagan value	15.75	16.20	255.15
PV synergy (2.3 / 0.08)			<u>28.75</u>
Value new entity			<u>667.90</u>
Original # shares	20.00		
Shares issued	13.00		
Total			33.00
Share price of merged entity		20.24	
Broadstore holding	20.00	20.24	404.79
Broadstore original value			<u>384.00</u>
Gain			<u>20.79</u>
Sagan holding	13	20.24	263.11
Sagan original value			<u>255.15</u>
Gain			<u>7.96</u>

For Further Reference:

Study Session 8, LOS 26.k

SchweserNotes: Book 2 p.302

CFA Program Curriculum: Vol.3 p.288

Question #33 of 60

B) both Broadstore and Sagan Termett shareholders would be reduced under Scenario 1.

Explanation

In Scenario 2, Sagan Termett shareholders receive cash for their shares and are, therefore, not affected by the realization of synergies; in this case, the acquirer bears all the risk. In Scenario 1, the Sagan Termett shareholders hold shares in the new entity; both sets of shareholders are affected by the realization of synergistic gains.

For Further Reference:

Study Session 8, LOS 26.l

SchweserNotes: Book 2 p.306

CFA Program Curriculum: Vol.3 p.289

Question #34 of 60

C) an average of the three metrics and a takeover premium of 35%.

Explanation

<i>Exellar (per share)</i>	<i>Avg. Metric</i>	<i>Value \$</i>
--------------------------------	--------------------	-----------------

Earnings	\$2.73	×	12.67	34.59
Sales	\$21.21	×	1.47	31.18
Book Value	\$13.92	×	2.57	35.77
Mean				\$33.85
Premium				35%
Value	\$33.85	×	1.35	\$45.69

For Further Reference:

Study Session 8, LOS 26.j

SchweserNotes: Book 2 p.294

CFA Program Curriculum: Vol.3 p.283

Question #35 of 60

B) strategic policy risk.

Explanation

The risk that managers enter into transactions, which may result in personal gains but are not in the best interests of shareholders, is known as strategic policy risk.

For Further Reference:

Study Session 8, LOS 25.h

SchweserNotes: Book 2 p.264

CFA Program Curriculum: Vol.3 p.236

Question #36 of 60

B) a utilitarian approach to business ethics.

Explanation

The utilitarian approach focuses on the best possible balance of good consequences over bad. The Kantian approach is based on the idea that people are not instruments and should be treated with respect. The Friedman doctrine argues that the only social responsibility of a business is to increase profits while staying within the rule of the law.

For Further Reference:

Study Session 8, LOS 24.d

SchweserNotes: Book 2 p.248

CFA Program Curriculum: Vol.3 p.190

Question #37 of 60

B) less than 0.90.

Explanation

$$\beta_U \approx \left[\frac{1}{1 + \left(\frac{D}{E} \right)} \right] \beta_E = \left[\frac{1}{1 + \left(\frac{40}{60} \right)} \right] 0.90 = 0.54$$

The calculation is not required if you understand the steps involved. Since Midwest News has no debt and Freedom's beta must be unlevered, the beta to be used must be less than 0.90 (Freedom's beta).

For Further Reference:

Study Session 9, LOS 28.d

Question #38 of 60

C) 9%.

Explanation

required return estimate = $\frac{\text{year-ahead dividend}}{\text{market price}} + \text{expected dividend growth rate}$

$$\text{required return estimate} = \frac{(\$3.00 \times 0.40)}{\left\{ \frac{\$15,000 \text{ million}}{375 \text{ million}} \right\}} + 0.06 = 0.09$$

Since Freedom Corporation has a dividend policy of paying 40% of earnings, dividend growth equals earnings growth.

The assumption is that Freedom's stock is correctly valued.

For Further Reference:

Study Session 9, LOS 28.a
SchweserNotes: Book 3 p.13
CFA Program Curriculum: Vol.4 p.51

Question #39 of 60

C) Expected growth in the market index's P/E ratio.

Explanation

The Gordon growth model calculates the equity risk premium by starting with the dividend yield on the market index, adding the consensus long-term earnings growth rate and subtracting the current long-term government bond yield. The expected growth in the market index's P/E ratio is an input used in the macroeconomic model.

For Further Reference:

Study Session 9, LOS 28.b
SchweserNotes: Book 3 p.15
CFA Program Curriculum: Vol.4 p.56

Question #40 of 60

A) 13.0%.

Explanation

$r_i = \text{risk-free rate} + \text{equity risk premium} + \text{size premium}_i + \text{specific-company premium}_i$

$$r_i = 3.5\% + 4.0\% + 3.5\% + 2.0\% = 13.0\%$$

For Further Reference:

Study Session 9, LOS 28.b
SchweserNotes: Book 3 p.15
CFA Program Curriculum: Vol.4 p.56

Question #41 of 60

B) \$95 per share.

Explanation

$$V_0 = B_0 + \frac{(ROE - r)(B_0)}{r - g}$$

$$B_0 = \frac{\$79.5 \text{ million}}{1.5 \text{ million}} = \$53 \text{ per share}$$

$$ROE = \$19.5 \text{ million} / \$79.5 \text{ million} = 0.245$$

$$r = 0.15 \text{ (given in problem)}$$

$$g = 0.03 \text{ (given in Exhibit 2)}$$

$$V_0 = 53 + \frac{0.245 - 0.15}{0.15 - 0.03}(53) = \$94.96 \text{ per share}$$

For Further Reference:

Study Session 11, LOS 33.d

SchweserNotes: Book 3 p.206

CFA Program Curriculum: Vol.4 p.472

Question #42 of 60

B) Only Statement 2 is correct.

Explanation

An issue not described in Exhibit 2 is control premium. Any control premium adjustment is normally added directly to a company's value estimate. Statement 1 is not correct. Since Midwest News does not pay a dividend, the free cash flow model would be better suited to compute the company's equity value rather than the dividend discount model. Statement 2 is correct.

For Further Reference:

Study Session 9, LOS 28.c

SchweserNotes: Book 3 p.19

CFA Program Curriculum: Vol.4 p.69

Study Session 11, LOS 31.f

SchweserNotes: Book 3 p.123

CFA Program Curriculum: Vol.4 p.298

Question #43 of 60

B) Principle 2.

Explanation

Both the probability of default and expected loss will vary with the state of the economy, so a weighted average may be taken. The expected loss is (the probability of default) × (loss given default), not the recovery rate. The present value of expected loss may be higher or lower than the expected loss, as the risk premium may be higher than the discount from the time value of money.

For Further Reference:

Study Session 13, LOS 38.a

SchweserNotes: Book 4 p.87

CFA Program Curriculum: Vol.5 p.185

Question #44 of 60

B) incorrect, as he should have instead stated selling a European *put* option.

Explanation

The option analogy for debt states that a long position in risky debt is equivalent to a long position in a riskless bond plus a short European put on the company's assets.

For Further Reference:

Study Session 13, LOS 38.d

SchweserNotes: Book 4 p.90

CFA Program Curriculum: Vol.5 p.193

Question #45 of 60

C) correct.

Explanation

European call on assets is the correct analogy for equity under the structural model for credit analysis.

For Further Reference:

Study Session 13, LOS 38.d

SchweserNotes: Book 4 p.90

CFA Program Curriculum: Vol.5 p.193

Question #46 of 60

C) 1.73%.

Explanation

The expected loss per year can be calculated as the difference between the average yield on risk-free debt and the average yield on the corporate bond. This assumes frictionless markets and hence a yield spread that is entirely due to credit risk.

Average risk-free yield = 0.01257

Average corporate yield = 0.02991

Expected percentage loss per year = 2.991% - 1.257% = 1.73%

For Further Reference:

Study Session 13, LOS 38.g

SchweserNotes: Book 4 p.95

CFA Program Curriculum: Vol.5 p.212

Question #47 of 60

C) Neither point is accurate.

Explanation

Reduced form models do allow for the systematic default of companies. A key advantage of reduced form models is that default probability is linked to the state of the economy. While one of the assumptions of reduced form model is that a zero-coupon bond trades, other liabilities can be used in the place of the zero-coupon bond.

For Further Reference:

Study Session 13, LOS 38.e

Question #48 of 60

A) section A, because the probability of default is not relevant for asset-backed securities.

Explanation

An asset-backed security does not default when a portion of the collateral defaults; thus, the probability of default is not relevant.

For Further Reference:

Study Session 13, LOS 38.i
SchweserNotes: Book 4 p.97
CFA Program Curriculum: Vol.5 p.218

Question #49 of 60

C) 56.8 million pesos.

Explanation

To calculate the fixed payment in pesos, first use the Mexican term structure to derive the present value factors:

$$Z_{360} = 1 / [1 + 0.050(360 / 360)] = 0.9524$$

$$Z_{720} = 1 / [1 + 0.052(720 / 360)] = 0.9058$$

The annual fixed payment per peso of notional principal would then be:

$$FS(0,2,360) = (1 - 0.9058) / (0.9524 + 0.9058) = 0.0507$$

The annual fixed payment would be: $0.0507 \times \$100M / 0.0893 = 56.8$ million pesos.

For Further Reference:

Study Session 14, LOS 40.c
SchweserNotes: Book 4 p.138
CFA Program Curriculum: Vol.5 p.305

Question #50 of 60

B) incorrect about long receiver swaption and short payer swaption.

Explanation

A payer swap can be replicated using a long payer swaption and short receiver swaption with the same exercise rates. Torrey's statement 1 about how if the premiums of the two options are equal, the exercise rate must be equal to the market swap fixed rate is correct.

For Further Reference:

Study Session 14, LOS 41.k
SchweserNotes: Book 4 p.178
CFA Program Curriculum: Vol.5 p.364

Question #51 of 60

A) correct.

Explanation

Statement 2 is correct.

For Further Reference:

Study Session 14, LOS 41.k

SchweserNotes: Book 4 p.178

CFA Program Curriculum: Vol.5 p.364

Question #52 of 60

B) \$15,434.

Explanation

Given the exercise rate of 5%, the call option has a positive payoff for nodes C++ and C+-.

The value of the option at node C++ can be calculated as:

$$[\text{Max}(0, 0.083 - 0.05)] \times \$2,000,000 = \$66,000$$

Similarly, the value at node C+- can be calculated as:

$$[\text{Max}(0, 0.0504 - 0.05)] \times \$2,000,000 = \$800$$

$$\text{Value at node C+} = [(0.5 \times 66,000) + (0.5 \times 800)] / (1.0531) = \$31,716$$

$$\text{Value at node C-} = [(0.5 \times 800) + 0] / (1.0322) = \$388$$

$$\text{And the value at node C} = [(0.5 \times 31,716) + (0.5 \times 388)] / (1.04) = \$15,435$$

For Further Reference:

Study Session 14, LOS 41.e

SchweserNotes: Book 4 p.172

CFA Program Curriculum: Vol.5 p.349

Question #53 of 60

B) \$101.69 million.

Explanation

The fixed dollar payment under the swap using the original yield curve is computed as:

$$Z_{360} = 1 / [1 + 0.040(360 / 360)] = 0.9615$$

$$Z_{720} = 1 / [1 + 0.045(720 / 360)] = 0.9174$$

The annual fixed payment per dollar of notional principal would then be:

$$FS(0,2,360) = (1 - 0.9174) / (0.9615 + 0.9174) = 0.044$$

The annual fixed payment would be:

$$0.044 \times \$100\text{M} = \$4.4 \text{ million}$$

Using the new U.S. term structure to derive the present value factors:

$$Z_{180}(360) = 1 / [1 + 0.042(180 / 360)] = 0.9794$$

$$Z_{180}(720) = 1 / [1 + 0.048(540 / 360)] = 0.9328$$

The present value of the fixed payments plus the \$100M principal is:

$$\$4.4\text{M} \times (0.9794 + 0.9328) + \$100\text{M} \times 0.9328 = \$101.69 \text{ million}$$

For Further Reference:

Study Session 14, LOS 40.d

SchweserNotes: Book 4 p.138

CFA Program Curriculum: Vol.5 p.305

Question #54 of 60**C)** -\$4.21 million.**Explanation**

Use the new Mexican term structure to derive the present value factors:

$$Z_{180}(360) = 1 / [1 + 0.050(180 / 360)] = 0.9756$$

$$Z_{180}(720) = 1 / [1 + 0.052(540 / 360)] = 0.9276$$

The present value of the fixed payments plus the principal is:

$$0.0507 \times (0.9756 + 0.9276) + 0.9276 = 1.0241 \text{ per peso}$$

Apply this to notional principal and convert at current exchange rate:

$$1.0241 \times (\$100\text{M} / 0.0893) \times 0.085 = \$97.48 \text{ million}$$

The value of the swap is the difference between this value and the pay dollar fixed present value derived in the previous question:

$$\$97.48 - \$101.69\text{M} = -\$4.21 \text{ million}$$

For Further Reference:

Study Session 14, LOS 40.d

SchweserNotes: Book 4 p.138

CFA Program Curriculum: Vol.5 p.305

Question #55 of 60**B)** Illiquid investments.**Explanation**

The risk that the private equity portion of the IS University's Endowment Fund would most likely suffer from is illiquidity. It can be difficult to trade the private equity investments because they are usually not listed on secondary securities markets. The private equity investments are diversified in terms of vintage and strategies. The IS endowment fund is exempt from taxation on capital gains or dividends.

For Further Reference:

Study Session 15, LOS 45.f

SchweserNotes: Book 5 p.73

CFA Program Curriculum: Vol.6 p.151

Study Session 16, LOS 47.e

SchweserNotes: Book 5 p.130

CFA Program Curriculum: Vol.6 p.247

Question #56 of 60**A)** 1.5%.

Explanation

Percentage management fee = management fee / paid-in capital

paid-in capital = Σ called-down

2016 % management fee = $1.95 / (75 + 25 + 30) = 0.015$

For Further Reference:

Study Session 15, LOS 43.h, i

SchweserNotes: Book 5 p.17, 18

CFA Program Curriculum: Vol.6 p.44, 46

Question #57 of 60

B) \$10 million.

Explanation

\$195 million Alpha Fund (all data in millions)

<i>Year</i>	<i>Called-down</i>	<i>Mgmt. Fees</i>	<i>Operating Results</i>	<i>NAV before Distributions</i>	<i>Carried Interest</i>	<i>Distributions</i>	<i>NAV after Distributions</i>
2014	30	0.45	-10	19.55		0	
2015	25	0.83	55	98.72		0	
2016	75	1.95	75	246.77	10.35	0	236.42

2014 NAV before distributions = $30 - 0.45 + (-10) = 19.55$

2015 NAV before distributions = $19.55 + 25 - 0.83 + 55 = 98.72$

2016 NAV before distributions = $98.72 + 75 - 1.95 + 75 = 246.77$

When NAV before distribution exceeds committed capital, the 20% carried interest is applied.

$(246.77 - 195) \times 0.2 = 51.77 \times 0.2 = 10.35$

In years 2017 and beyond, the 20% carried interest is applied to the change in NAV before distributions. For example, if the 2017 NAV before distributions was 296.77, then the carried interest would equal $(296.77 - 246.77) \times 0.2 = 50 \times 0.2 = 10$.

The NAV after distributions subtracts carried interest and distributions from NAV before distributions.

For Further Reference:

Study Session 15, LOS 45.i

SchweserNotes: Book 5 p.83

CFA Program Curriculum: Vol.6 p.161

Question #58 of 60

C) Increasing capital requirements.

Explanation

Venture capital investments require considerable capital to develop and grow. Companies that require venture capital usually have significant cash burn as they develop new products. Venture capital investments are primarily funded through equity and utilize little or no debt. Risk measurement of venture capital investments is difficult because of their short operating history, and the required development of new markets and technologies.

For Further Reference:

Study Session 15, LOS 45.c

SchweserNotes: Book 5 p.64

CFA Program Curriculum: Vol.6 p.145

Question #59 of 60

C) \$55 million.

Explanation

post-money valuation = $V / (1 + r)^t$

$V = \$300$ million; $r = 40\%$; $t = 5$ years

post-money valuation = $300 \text{ millions} / (1 + 0.4)^5 = 55.78$ million

Note that the adjusted discount rate incorporating the probability of failure is directly given in the question as 40%.

For Further Reference:

Study Session 15, LOS 45.j

SchweserNotes: Book 5 p.85

CFA Program Curriculum: Vol.6 p.166

Question #60 of 60

A) \$32.40.

Explanation

The ownership proportion of the venture capital (VC) investor is $f = \text{INV} / \text{POST} = \$9,000,000 / 90,000,000 = 0.10$ or 10%.

$\text{shares}_{\text{VC}} = \text{shares}_{\text{Founders}} (f / 1 - f) = 2,500,000 \times (0.10 / 0.90) = 277,778$

$\text{price} = \text{INV} / \text{shares}_{\text{VC}} = \$9,000,000 / 277,778 = \$32.40$ per share

For Further Reference:

Study Session 15, LOS 45.j

SchweserNotes: Book 5 p.85

CFA Program Curriculum: Vol.6 p.166